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**Search scope:** JP (bibliographic data only)

**Years:** 1991-2008

**Patent/Publication No.:** JP9107030

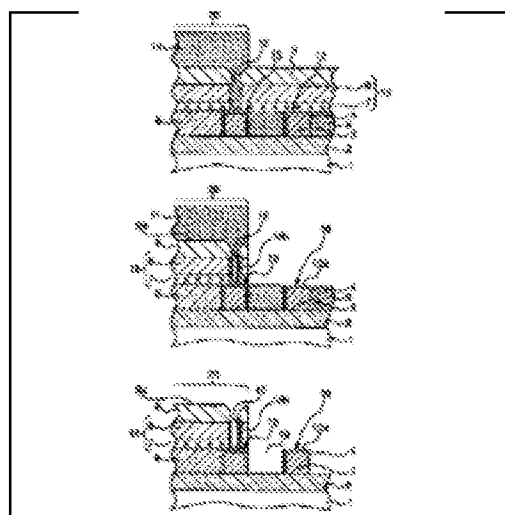
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### JP9107030 A METHOD FOR MANUFACTURING SEMICONDUCTOR DEVICE SHARP KK

#### Abstract:

**PROBLEM TO BE SOLVED:** To provide a method for manufacturing a semiconductor device which can effectively reduce electrostatic capacitance between wires when a multilayer wire structure is formed, in which mechanical strength of an upper layer wire can be enhanced, and in which reliability in elements cannot be damaged.



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**SOLUTION:** On an underlayer insulation film 2, with the use of resist 5 as a mask, in a region where a lower layer wire 10 does not exist out of an upper layer wire region 20, a silicon oxide film 6 is formed by a liquid phase growth method using a hydrogen silicon fluoride solution. Etching is performed until an upper face level of the lower layer wire 10. Thereon, a protection film 7 having a strength for the hydrogen silicon fluoride solution is formed, and successively a silicon oxide film 8 is formed by the liquid phase growth method using the hydrogen silicon fluoride solution. A metal film 9 is formed on an interlayer insulation film 18. With the use of resist 11, the metal film 9 is etched to form an upper layer wire, and also the interlayer insulation film 18 is etched to remove resist 5, 11.

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NASU MASAAKI

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	invention	additional
<b>Advanced</b>	H01L0021768 20060101 H01L0023522 20060101	
<b>Core</b>	H01L002170 20060101 H01L002352 20060101	

**Priority:**

JP1995261530A 19951009

**Patents Citing This One:**

- ⇒ US5930230 A 19990727 Qualcomm Incorporated
- ⇒ US6424619 B2 20020723 Qualcomm Incorporated

**No data available**

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